A.33 Delta Tule Pea (*Lathyrus jepsonii* var. *jepsonii*)

A.33.1 Legal Status

Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*) is not listed under either federal or California Endangered Species Acts. Its Heritage Ranking in the California Natural Diversity Database is G5T2/S2.2, which means that this species has a population or stand demonstrably secure to ineradicable due to being commonly found in the world. In contrast, this particular variety of the species has been ranked as globally (G) and within the state (S) rarer with either between six to 20 viable element occurrences, 1,000 to 3,000 individuals, or 2,000 to 10,000 acres of occupied habitat; and the state threat level rank is "threatened."

The California Native Plant Society (CNPS) List ranking of 1B.2 for Delta tule pea indicates that it is rare, threatened, or endangered in California and elsewhere, and is considered by CNPS to be fairly endangered in California with between 20 to 80 percent of occurrences threatened. Plants with a List rank of 1B are considered by the California Native Plant Society to meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Fish and Game Code.

A.33.2 Species Distribution and Status

Range and Status

The range of Delta tule pea extends from Sacramento and Solano Counties in the north, Napa and Sonoma Counties in the west, and Contra Costa and San Joaquin Counties in the south (Figure A.33.1). Delta tule pea is endemic to California and its distribution is based on 207 observations (Calflora 2007). Historically, it was reported as common in Suisun Marsh in 1894 and 1911, but today it is occasional to rare in Suisun Marsh. It occurs throughout the legal Delta (CNDDB 2008) and along the Napa River (Dutchman Slough) (Goals Project 2000).

Distribution and Status in the Planning Area

Within the BDCP Planning Area, there are occurrences of Delta tule pea at and immediately above the tidal zone in marshes and along rivers and streams (Figure A.33.2). It has been observed near Hass Slough, Snodgrass Slough, Lost Slough, on Ryer Island, Staten Island, Andrus Island, Bouldin Island, Rough and Ready Island, Browns Island, Winter Island, on the banks of the Middle River by the Upper and Lower Jones Tracts, and near Collinsville and Pittsburgh among other locations throughout the Delta (CNDDB 2008). It also occurs within the tidal zone along Calhoun Cut and Barker Slough (Witham and Kareofelas 1994).

Population trends of Delta tule pea have not been documented. It is unclear whether this species is in decline. According to the CNPS (2008), most known occurrences are small, and occurrences of Delta tule pea in California are highly limited and the species is at risk throughout its range.

Source: California Department of Fish and Game, CNDDB, 2008.
Consortium of California Herbaria, 2008.

Figure A.33.1. Delta Tule Pea Statewide Recorded Occurrences

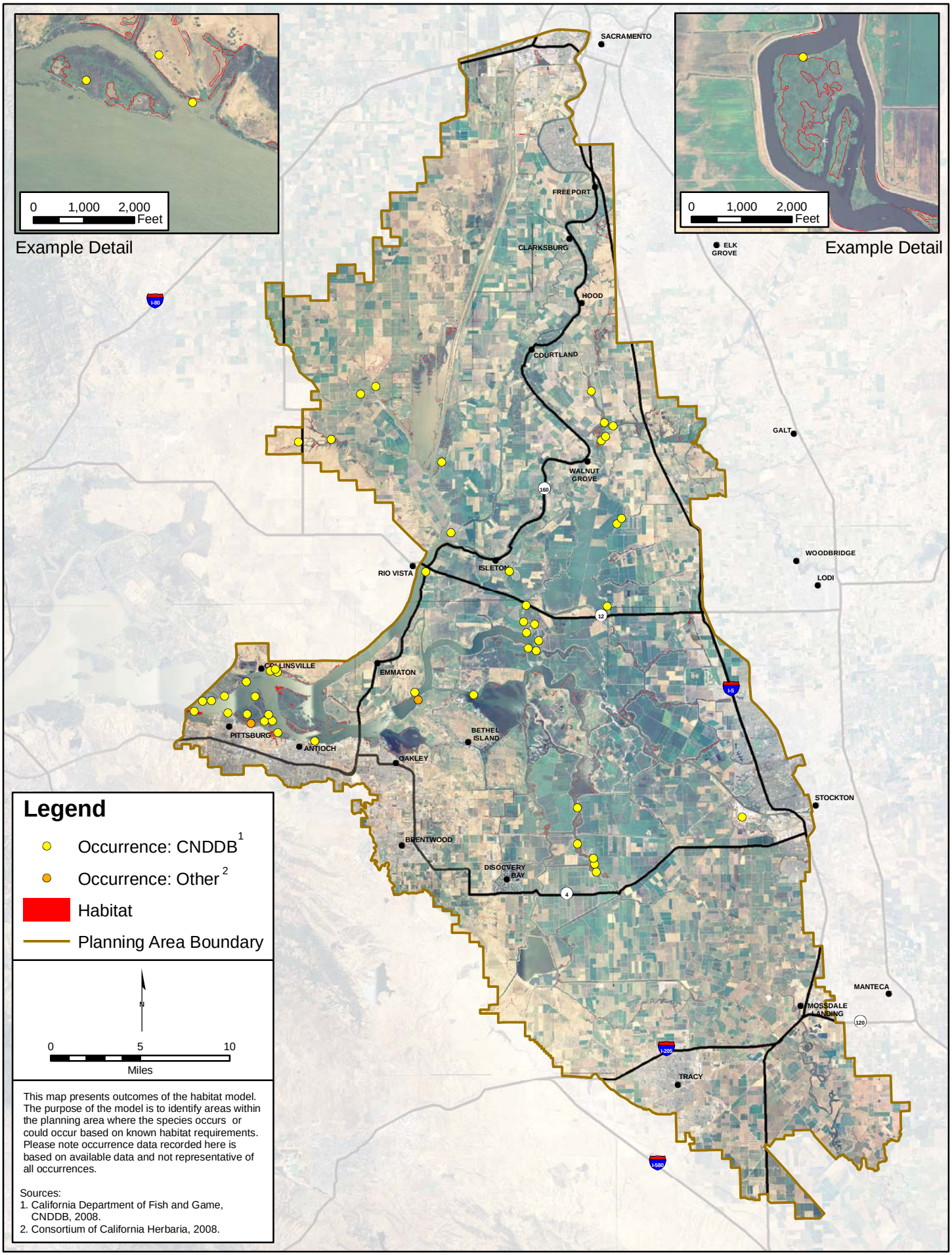

Figure A.33.2. Delta Tule Pea Habitat Model and Recorded Occurrences

A.33.3 Habitat Requirements and Special Considerations

Delta tule pea occurs on the borders of fresh and brackish marshes from zero to 13 feet in elevation (Grewell et al. 2007, CNPS 2008). It has been observed to co-occur with or near other covered plant species, such as soft bird's-beak (*Cordylanthus mollis* ssp. *mollis*), Mason's lilaeopsis (*Lilaeopsis masonii*), Suisun Marsh aster (*Symphyotrichum lentum*), and Delta mudwort (*Limosella subulata*) (CNDDB 2008).

A.33.4 Life History

Delta tule pea is a glabrous climbing perennial herb with winged stems and is a member of the pea family (Fabaceae) (Hickman 1993). It is identified by the number of leaflets, its glabrous winged stem, blue-grey leaf color, and pink to pink-purple flowers. Because of its climbing habit, Delta tule pea tends to grow over other vegetation and has stems less than 8.2 ft. The leaves have small narrow, stipules, 10 to 16 leaflets, and coiled branched tendrils (Hickman 1993). It bears six to 15 pink-purple flowers, 0.6 to 0.8 inches long, in an unbranched inflorescence (raceme) at the end of the stems. The fruits (legumes) are glabrous (without hairs) (Hickman 1993, CNPS 2008). This species blooms from May to September (CNPS 2008).

A.33.5 Threats and Stressors

The primary threat to Delta tule pea is the loss of marsh and floodplain habitat within the range of the species. Potential ways this habitat could be eliminated or degraded include agriculture, water diversions, and erosion (CNPS 2008). Fishing and hunting access also pose a threat to this species through trampling impacts (Witham and Kareofelas 1994).

A.33.6 Relevant Conservation Efforts

Delta tule pea is proposed for coverage under the Solano County Habitat Conservation Plan (HCP) and the Yolo County HCP/Natural Community Conservation Plan.

The CALFED Bay-Delta Ecosystem Restoration Program Plan's Multi-Species Conservation Strategy designates the Delta tule pea as "Contribute to Recovery" (CALFED Bay-Delta Program 2000). This means that CALFED will undertake actions under its control and within its scope that are necessary to recover the species. Recovery is equivalent to the requirements of delisting a species under federal and state ESAs.

A.33.7 Species Habitat Suitability Model

Habitat. Vegetation types designated as species habitat in this model correspond to the mapped vegetation associations in the BDCP GIS vegetation data layer. Delta tule pea habitat is identified as the area within 10 feet of the landward side of the landward boundaries of Tidal Freshwater Emergent Wetland land cover type throughout the BDCP Planning Area and soft bird's-beak habitat (*Distichlis spicata*-annual grasses, *Distichlis spicata-Juncus balticus*, *Distichlis spicata-Salicornia virginica*, Pickleweed [*Salicornia virginica*], *Salicornia virginica-Cotula coronopifolia*, and *Salicornia virginica-Distichlis spicata* land cover types west of the Antioch Bridge) exclusively where these landcover types are adjacent to Grassland, Valley Riparian, or Agriculture landcover types.

Assumptions. Historical and current records of this species indicate that its distribution extends almost throughout the BDCP Planning Area having been observed in tidally influenced waters from Cache and Snodgrass sloughs southward and from the Middle River channel of the San

Joaquin River near Highway 4 northwards (Figure A.33.2) (Witham and Kareofelas 1994, CNDDB 2008). While there are no occurrences within the BDCP Planning Area north of Liberty Island or in the various channels of the San Joaquin River south of Highway 4, patches of suitable habitat extend into those areas. For purposes of this model, a 10 foot-wide buffer on the landward side of the landward boundaries of the Tidal Freshwater Emergent Wetland land and soft bird's-beak habitat (Grewell et al. 2007) is included as the potential extent of habitat that supports Delta tule pea.

A.33.8 Recovery Goals

A recovery plan has not been prepared for this species and no recovery goals have been established.

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